

Claims

- [c1] 1. A blinking backlight device, comprising:
 - a storage unit, for storing at least one $(N-1)^{th}$ frame data; and
 - a blinking control module, having an image detection unit, connected to a data source and the storage unit, for receiving a N^{th} frame data and comparing the N^{th} frame data and the $(N-1)^{th}$ frame data read from the storage unit according to a motion image detection algorithm to output a detection signal;
 - wherein N is a positive integer larger than or equal to 2.
- [c2] 2. The blinking backlight device of claim 1, wherein the motion image detection algorithm detects whether an image displayed by the blinking backlight device is a motion image or not.
- [c3] 3. The blinking backlight device of claim 2, wherein when the image displayed by the blinking backlight device comprises a motion image, a blinking backlight is enabled by the detection signal.
- [c4] 4. The blinking backlight device of claim 2, wherein when the image displayed by the blinking backlight de-

vice is not a motion image, a blinking backlight is disabled by the detection signal.

- [c5] 5. The blinking backlight device of claim 1, further comprising:
 - a light source brightness balance module, having a cycle and brightness control unit, for processing a received scan signal and a clock signal to output a light source duty cycle signal and a brightness control signal.
- [c6] 6. The blinking backlight device of claim 5, wherein the cycle and brightness control unit comprises:
 - a duty cycle control mechanism, for controlling a duty cycle of a fluorescence lamp when the fluorescence lamp is activated; and
 - a brightness control mechanism, for controlling a brightness of the fluorescence lamp according to whether the image displayed by the blinking backlight device is the motion image or not.
- [c7] 7. The blinking backlight device of claim 5, wherein the light source brightness balance module further comprises a signal synchronization unit connected to the cycle and brightness control unit for synchronizing the scan signal and the clock signal.
- [c8] 8. The blinking backlight device of claim 5, wherein the

fluorescence lamp comprises cold cathode fluorescence lamp (CCFL).

- [c9] 9. The blinking backlight device of claim 1, wherein the light source brightness balance module further comprises a data latch connected to the image detection unit and the storage unit for outputting a frame data received and stored in the storage unit.
- [c10] 10. The blinking backlight device of claim 9, wherein the storage unit comprises:
a storage medium, for storing the frame data ; and
a storage interface controller, connected to the storage medium for storing and reading the frame data stored in the storage medium.
- [c11] 11. A method of operating a blinking backlight device, comprising:
determining whether an image displayed comprises a motion image or not according to two continuous frame data;
when the image displayed comprises a motion image, a blinking backlight is enabled; and
when the image displayed does not comprise a motion image, a blinking backlight is disabled.
- [c12] 12. The method of claim 11, further comprising:

adjusting a brightness of a light source.

- [c13] 13. The method of claim 12, wherein a method of determining whether to adjust the brightness of the light source or not comprises determining an image displayed by the blinking backlight device comprises the motion image or not according to a scan signal and a clock signal.
- [c14] 14. The method of claim 13, wherein when the image displayed by the blinking backlight device comprises the motion image, a brightness control signal is outputted to increase the brightness of the light source.
- [c15] 15. The method of claim 13, wherein when the image displayed by the blinking backlight device does not comprise the motion image, a brightness control signal is outputted to decrease the brightness of the light source.